

ABSTRACT

ANALYSIS OF DECREASING PROCALCITONIN AND C-REACTIVE PROTEIN LEVELS IN SEPTIC PATIENTS RECEIVING CEFTRIAZONE BOLUS INTRAVENOUS AND CONTINUOUS INTRAVENOUS ROUTE

(The study was conducted at Internal Medicine Department Dr. Saiful Anwar Hospital Malang)

Background : Ceftriaxone is a third generation cephalosporin antibiotic that has a broad spectrum especially against gram negative. Based on its pharmacokinetic and pharmacodynamic profile, ceftriaxone is a bactericidal group antibiotic and is included in the time dependent antibiotic class. So, to get the optimal bactericidal effect of this drug a longer exposure time is needed compared to high drug concentrations in the blood ($T > MIC$).

Objective : To analyze of decreasing procalcitonin and CRP levels in septic patients receiving antibiotic therapy with ceftriaxone route intravenous bolus and intravenous drip route.

Method : This study is a prospective experimental study with cohort research design, and data analysis using unpaired comparative analysis methods. Observation of procalcitonin and CRP in each group were carried out three times, namely in the form of baseline data, day 3, and day 5 post ceftriaxone therapy was given. Patients who met the inclusion criteria were divided into two treatment groups. The first group received ceftriaxone therapy with an intravenous bolus route and the second group with intravenous drip route.

Result : Before treatment, the average value of procalcitonin and CRP in 17 patients with ceftriaxone intravenous bolus therapy was $23,50 \pm 5,59$ and $32,75 \pm 2,14$, whereas in 18 patients with intravenous drip route is $12,98 \pm 2,75$ and $35,46 \pm 2,28$. At 3 and 5 day after therapy there was a significant reduce ($p < 0,05$) both procalcitonin and CRP level. There was no significant ($p > 0,05$) comparison of reduce procalcitonin and CRP level between intravenous bolus and intravenous group.

Conclusion : There is no difference in reducing of procalcitonin and CRP level in patients with ceftriaxone intravenous bolus or intravenous drip administration.

Keyword : Ceftriaxone, intravenous bolus, intravenous drip, procalcitonin, CRP.